

ABSTRACT

An appearance inspection apparatus and method using at least one telecentric lens, although at least two is preferred and at least a corresponding number of line sensors arranged in parallel with the image capture direction for inspecting a large circuit board. When two lenses are used two images are formed, which partially overlap each other. If image data for one line is captured in this state, a scanning head having two sets of telecentric optical systems move one line at a time in the driving direction . By repeating the same steps, data for two image segments which partially overlap throughout the entire line of board are obtained. The two image segments are synthesized after displacement of positions when colors in the overlapping portion of the two pieces of images are corrected. Inspection of board is then performed based on the combined image.